Amendments to the Claims

Please withdraw Claims 1-7 and 10-16. Please amend Claims 8 and 17. The Claim Listing below will replace all prior versions of the claims in the application:

Claim Listing

1. (Withdrawn) A method for inspecting a channel using a flexible sensor connected to at least one elastic member containing a pressurizable chamber for maintaining the sensor position proximate to a component surface, said method comprising:

   inserting the sensor with a deflated chamber into a first end opening of the channel;

   inflating the chamber; and

   measuring the sensor response as the sensor is moved along the channel and through an end opening of the channel.

2. (Withdrawn) The method as claimed in Claim 1 wherein the sensor is an eddy current sensor.

3. (Withdrawn) The method as claimed in Claim 1 wherein the sensor is an eddy current sensor array.

4. (Withdrawn) The method as claimed in Claim 1 further comprising moving the sensor out of a second opening of the channel.

5. (Withdrawn) The method as claimed in Claim 4 further comprising performing a second scan by deflating the chamber, inserting the sensor into the second end opening, inflating the chamber, and measuring the sensor response as the sensor is withdrawn from the channel through the first end opening.

6. (Withdrawn) The method as claimed in Claim 5 wherein the sensor is inserted into the channel openings and inflated at a distance less than one-half the channel length.

7. (Withdrawn) The method as claimed in Claim 6 wherein said distance is approximately one-third of the channel length.

8. (Currently Amended) ~~The method as claimed in Claim 1 further comprising~~ A method for inspecting a channel using a flexible sensor connected to at least one elastic member containing a pressurizable chamber for maintaining the sensor position proximate to a component surface, said method comprising:

a first scan comprising inserting the sensor with a deflated chamber into a first end opening of the channel, inflating the chamber, and measuring the sensor response as the sensor is moved along the channel and through a second end opening of the channel;

a second scan comprising inserting the sensor with a deflated chamber into the second end opening of the channel, inflating the chamber, and measuring the sensor response as the sensor is moved along the channel in the opposite direction as the first scan and through the first end opening of the channel; and

combining measurement responses from first and second scans in opposite directions.

9. (Original) The method as claimed in Claim 8 wherein the combination is an average of the scans.

10. (Withdrawn) The method as claimed in Claim 1 further comprising measuring sensor position.

11. (Withdrawn) A method for inspecting a channel using at least one flexible sensor connected to an elastic member containing a pressurizable chamber, said method comprising:

inserting the sensor into a first end opening of the channel and inflating the chamber;

measuring the response as the sensor is moved through a second end opening of the channel;

deflating the chamber and inserting the sensor through the second end opening;

inflating the chamber, and measuring the response as the sensor is withdrawn through the first end opening of the channel.

12. (Withdrawn) The method as claimed in Claim 11 wherein the sensor is an eddy current sensor.

13. (Withdrawn) The method as claimed in Claim 11 wherein the sensor is an eddy current sensor array.

14. (Withdrawn) The method as claimed in Claim 11 wherein the sensor is inserted into the channel openings at a distance approximately one-third of the channel length.

15. (Withdrawn) The method as claimed in Claim 12 wherein the channel is an engine disk slot and measuring the sensor response involves detecting the presence of crack.

16. (Withdrawn) The method as claimed in Claim 12 wherein the channel is a bolt hole.

17. (Currently Amended) A method for inspecting a channel using a flexible sensor connected to at least one elastic member containing a pressurizable chamber for maintaining the sensor position proximate to a component surface, said method comprising:

inserting the sensor with a deflated chamber into a first channel opening;

inflating the chamber;

measuring the sensor response as the sensor is moved along the channel to form a first scan;

measuring the sensor response as the sensor is moved along the channel in the opposite direction to form a second scan; and

combining measurement responses from first and second scans in opposite directions.

18. (Previously presented) The method as claimed in Claim 17 wherein the combination is an average of the scans.